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John A. Kitzhaber, MD, Governor

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May 14, 2014 *Also Sent Via E-mail*

Mr. Robert J. Wyatt
NW Natural
220 N.W. Second Avenue
Portland, OR 97209

Re: Final Hydraulic Source Control and Containment System Groundwater Model Update Report
NW Natural "Gasco Site" and Siltronic Corporation Facility
Portland, Oregon
ECSI Nos. 84 and 183

Dear Mr. Wyatt:

The Department of Environmental Quality (DEQ) reviewed the "Final Hydraulic Source Control and Containment System Groundwater Model Update Report, NW Natural Gasco Site" dated March 2014 (Model Update Report). DEQ downloaded a soft copy of the document for review on March 26, 2014. Anchor QEA, LLC (Anchor) prepared the Model Update Report on behalf of NW Natural.

The Model Update Report responds to DEQ's comments on the Revised Model Update Report[1] which were provided to NW Natural in a February 13, 2014 letter with attachments. Attachment 2 of DEQ's February 13th letter included comments from the U.S. Envrironmental Protection Agency (EPA). EPA's and DEQ's comments were discussed during a conference call on February 20, 2014.

DEQ's comments on the Model Update Report are attached. In addition to DEQ, the EPA reviewed the document. The DEQ and EPA comment sets are attached as Attachment 1 and Attachment 2 respectively. The attachments provide additional details regarding the information needed to finalize the report.

The primary purpose of this letter is to inform NW Natural that DEQ approves the Model Update Report subject to NW Natural revising the document consistent with the EPA's and DEQ's attached comments.

DEQ requests that NW Natural revise and resubmit the Model Update Report consistent with the attached comments on or before June 13, 2014.

[1] Anchor QEA, LLC, "Revised Hydraulic Source Control and Containment System Groundwater Model Update Report - NW Natural Gasco Site," dated October 2013 (DEQ downloaded soft copy on October 10, 2013), a report prepared for NW Natural.

Please contact me with questions regarding this letter or the attachments.

Sincerely,

Dana Bayuk
Project Manager
Cleanup and Site Assessment Section

Attachments: DEQ Comments
EPA Comments (revisions to Table 3)

Cc: Myron Burr, Siltronic Corporation
Patty Dost, Pearl Legal Group
Alan Gladstone, Davis Rothwell Earle and Xochihua
John Edwards, Anchor
Ben Hung, Anchor
Pradeep Mugunthan, Anchor
John Renda, Anchor
Michael Riley, Anchor
Carl Stivers, Anchor
Rob Ede, Hahn & Associates
James Peale, Maul Foster Alongi
Sean Sheldrake, EPA
Rich Muza, EPA
Lance Peterson, CDM Smith
Scott Coffey, CDM Smith
Keith Johnson, NWR/Cleanup & Site Assessment Section
Tom Gainer, NWR/Cleanup & Tanks Section
Henning Larsen, NWR/Cleanup & Tanks Section
ECSI No. 84 File
ECSI No. 183 File

ATTACHMENT 1

DEQ COMMENTS
FINAL HYDRAULIC SOURCE CONTROL AND CONTAINMENT SYSTEM GROUNDWATER MODEL UPDATE REPORT, NW NATURAL GASCO SITE
Dated March 2014 (received via download on March 26, 2014)

DEQ Comments sent May 14, 2014

DEQ's comments on the above-referenced report are provided below.

Comment 1, Section 2.2. DEQ requests that Table 3 be referenced in this section of the Model Update Report as the table supplements information presented on assumptions and limitations related to boundary conditions.

Comment 2, Section 2.2.7. The Model Update Report provides contradictory information regarding modeling of the basalt water-bearing zone (WBZ) and does not address DEQ's previous comments[1].

Appendix A provides a copy of NW Natural's February 19, 2014 responses to DEQ's February 13, 2014 comments letter. According to NW Natural's responses to DEQ's comments regarding the basalt (e.g., see Comment 1, General Comment, Basalt as a no-flow boundary), "The constant-head boundary in the Upper Alluvium WBZ represents groundwater flow from the basalt to the model domain. *The report will clarify that the basalt is a flow boundary* (italics added)." However, the first sentence of Section 2.2.7 of the Model Update Report states that, "The model assumes that no-flow boundaries are an appropriate representation of the groundwater flow regime at the upstream and downstream model boundaries along the U.S. Moorings and Siltronic properties and across the basalt bedrock interface at the bottom of the model." The first sentence in the third paragraph makes it clear that, "The basalt bedrock below the model domain is modeled as a no-flow boundary. At the upland model boundary, flows originating from the basalt are captured in the upland constant head boundary condition in the Upper Alluvium WBZ."

DEQ continues to maintain that:

- The basalt recharges the Alluvium WBZ; and
- Assuming all groundwater enters the upgradient boundary through the Alluvium WBZ could result in the model under predicting groundwater flux across the site, especially in the deeper portions of the Alluvium WBZ.

Going forward, DEQ understands the basalt is assumed to be a no-flow boundary (at least initially), and all groundwater flow along the southwest (upgradient) boundary enters the model through the upper Alluvium WBZ. From Table 3 of the Model Update Report, DEQ further understands that actual and simulated hydrographs in the lower and deep

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[1] See DEQ's February 13, 2014 comments letter; Attachment 1, Comment 1, General Comments – Model Assumptions and Limitations, 1st and 2nd bullets.

Alluvium WBZ will be used to assess the influence of this assumption during calibration. Based on the results of this assessment the basalt no-flow bound may be modified.

DEQ is not requesting that NW Natural alter the initial modeling approach based on these comments. DEQ does request that NW Natural confirm, clarify, or correct our understandings. DEQ anticipates that evaluations of the basalt no-flow boundary will be a focus of the bimonthly modeling status discussions.

Comment 3, Section 2.4.1. NW Natural indicates that the hydraulic conductivity values calculated for PW-08-39 and PW-09-92 represent low and high outliers for the upper Alluvium at the site. DEQ considers the values to represent reasonable site-specific low-end and high-end hydraulic conductivity values for purposes of calibrating the model and simulating flow in the upper Alluvium WBZ.

Comment 4, Section 3.4. This section of the Model Update Report indicates that NW Natural will provide status updates on modeling work every other week. The section should be revised to indicate that Table 3 of the Model Update Report will be revised and submitted prior to each bimonthly update to support discussions.

NW Natural indicates that a "working version" of the model will be provided to DEQ, "...after it is updated, calibrated, and validated using the Phase 1 test data." Based on this information DEQ will expect to receive the model prior to NW Natural initiating the long-term phase (Phase 2) of hydraulic control and containment system testing.

Table 3. DEQ requests that the LNG Basin "Drain Boundary" be added to the "Model Input/Boundary Condition" column. DEQ considers the Drain Boundary to be a model parameter that may change during the modeling process. Adding the parameter to Table 3 will allow changes to be tracked and documented.

Comment 5, Figures. DEQ's February 13, 2014 letter included comments regarding NW Natural's projections of the upper Alluvium WBZ out and under the Willamette River. In an e-mail sent February 21, 2014, NW Natural provided geologic cross-sections that graphically depict a proposal for the projections based on drilling observations made in borings located along geologic cross section E-E'. DEQ requests that the Model Update Report include geologic cross-sections revised consistent with the NW Natural's proposed approach. For clarification, revisions made to the geologic cross-sections should be incorporated into the corresponding stratigraphic sections developed for the model (e.g., see figure 4, 6, 8, and 10 of the Model Update Report).

Table 3
Summary of Model Assumptions and Limitations

Model Input/Boundary Condition	Initial Assignment in Model (range)	Source Information for Model Assignment	Final Assignment in Model (post-calibration)	Potential Bias/Limitation of Model Assignment/Assumption	Cause-Effect from Changes to Assignments during Calibration	Anticipated Sensitivity during Model Calibration/Uncertainty after Calibration
Horizontal Hydraulic Conductivity (Kh)	Fill WBZ: 10 ft/d; Upper Silt WBZ: 0.5 ft/d ; Upper Alluvium WBZ: 2 to 200 ft/d (spatially variable); Lower and Deep Lower Alluvium WBZ: 100 to 1,250 ft/d (spatially variable)	Average Values used for initial assignment derived from....... [1] On-Site Step Tests discussed in Section 2.4.1 for the Alluvium WBZs; for the Fill and Upper Silt WBZs same starting values as 2011 Model	To be completed after final calibration	Assigning average Kh for modeled strat units could present higher than actual Khs for some areas that could result in a high bias to groundwater flow/recharge to pumping stress in some areas of the model causing less drawdown in pumping wells (resulting in higher than actual achievable yields) and less drawdown influence to distant observation wells; lower Kh than actual will present an opposite influence.	Increasing Kh during calibration will dampen/decrease water level response to pumping; decreasing Kh during calibration will magnify/increase water level response to pumping.	Hydraulic conductivity is anticipated to be a key parameter during calibration. The range for calibration was established from site-specific testing. The large dataset available for calibration should provide a tight constraint through the calibration process. Consequently, it is anticipated that the uncertainty surrounding the final set of hydraulic conductivity values determined for each WBZ will be adequately constrained.
Vertical Hydraulic Conductivity (Kv)	Horizontal to vertical hydraulic conductivity anisotropy ratios (Kh/Kv) of 10 to 100 for all units	Horizontal hydraulic conductivities as discussed above; anisotropy range from Spitz and Moreno (1996) and Freeze and Cherry (1979)	To be completed after final calibration	Vertical hydraulic conductivity will affect both lateral and vertical flows between and within the units. Higher anisotropy ratios will produce more lateral flows, and lower anisotropy values will result in increasing vertical flows.	Higher anisotropy will produce greater lateral flo [3] per layers.	The same dis [2] as the horizontal hydraulic conductivity applies here.
Confined Storage Coefficient	10^{-4} for all WBZs; will vary between 10^{-3} to 10^{-5} during calibration	Average Values used for initial assignment derived from....... [4] On-site step tests for Alluvium WBZs; range from Spitz and Moreno (1996) and Freeze and Cherry (1979)	To be completed after final calibration	The storage coefficient affects the volume of water released or absorbed by the aquifer matrix per unit change in head in the aquifer.	The confined storage coefficient will strongly affect the shape of predicted hydrographs at wells completed in layers [5] water table.	Model calibration will be sensitive to the confined storage coefficient values particularly in matching the shape of the observed hydrographs. The time series of site-specific water levels provide a tight constraint in determining the final parameter value. Therefore, it is anticipated that the uncertainty surrounding the final parameter value will be adequately constrained.
Unconfined Storage Coefficient	Starting value of 0.05; will vary between 0.05 to 0.3	Starting value based on previous modeling efforts; range from Spitz and Mo [7] 996) and Freeze and [7] (1979)	To be completed after final calibration	This parameter determines the change in storage in the water table aquifer over tidal cycles and from time-varying recharge. It is often mistakenly referred to as specific yield. In a tidal setting, it represents the draining and filling of soils over a tidal cycle, which is much too short for specific yield to be attained. Therefore, the calibrated value is expected to be well below typical values for specific yield.	Same as the confined storage coefficient except changes in parameter value will a [6] er levels in the water tab [6] n the model.	Same comments as for confined storage coefficient but applies only to wells completed in model layers where the unconfined water table occurs.
Time-Step for Transient Simulations	Minutes to an hour	Will be determined based on numerical stability requirements ...and the temporal resolution of the data being calibrated to. [10]	To be completed after final calibration	Time-steps (or str [8] ods in MODFLOW) need to be short enough to represent the tidally varying hydrographs in the data. Generally, hourly stress periods are more than adequate to do this. However, shorter stress periods may be used if they do not result in excessively long run times.	This is not a calibration parameter.	There is no anticipated [9] vity of the model results with respect to stress peri [9] as long is stress periods of an hour or less are used.
Model Boundary Conditions						
Upland Constant Head	Initial values for each set-point test period in Phase 1 will be based on data at upland wells. Initial values will vary between the set-point test based on monitoring data.	[11] Based on water levels in five wells (MW-9-29, MW-12-36, NWN-3-17, NWN-4-15, and NWN-5-20) completed in the fill	To be completed after final calibration	Upland boundary heads have a direct effect on fluxes across the boundary. A mis-specification of the constant head boundary could result in greater or less flux across the boundary and to the pumping source. A mis-specified constant head boundary could result in inaccurate fluxes at the boundary. Changes to head boundary conditions will remain within observed water level ranges established at the five upland fill wells.	During calibration, the upland boundary heads will be adjusted to represent upland boundary flux to achieve a better match between predicted and observed water levels.	The model calibration is expected to be moderately sensitive to the upland constant head boundary condition. If the modeled upland boundary flow is substantially different from reality, it will show as a poor match to water levels at upland wells. The calibration dataset provides sufficient constraint on the upland boundary heads such that the final constant head values will produce the appropriate boundary flux. Consequently, uncertainty in the final parameter and the associated uncertainty in the model predictions are anticipated to be well constrained.

Summary of Comments on Final Hydraulic Source Control and Containment System Groundwater Model Update Report

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Number: 1 Author: Author Subject: Text Box Date: 5/13/2014 1:57:19 PM

Average Values used for initial assignment derived from.......

Number: 2 Author: Author Subject: Sticky Note Date: 5/13/2014 1:54:26 PM

Should point out the following:

While vertical K is not measured directly and is assumed from literature values, the water level dataset available to evaluate during calibration will constrain the uncertainty.

Number: 3 Author: Author Subject: Sticky Note Date: 5/13/2014 1:54:05 PM

More narrative related to cause-effect is needed here. Intro sentence is good, but should finish with ".......resulting in an increased drawdown response in deeper layers; Lower anisotropy will have the opposite effect".

Number: 4 Author: Author Subject: Text Box Date: 5/13/2014 1:57:24 PM

Average Values used for initial assignment derived from.......

Number: 5 Author: Author Subject: Sticky Note Date: 5/13/2014 1:54:40 PM

Good intro, but then should explain what the response in terms of water level hydrographs will be to changes in storage coefficient. For example: Decreasing Storage Coefficients in the model will result in increased amplitude and response in the modeled water level hydrographs. Increasing will have an opposite effect.

Number: 6 Author: Author Subject: Sticky Note Date: 5/13/2014 1:54:48 PM

Should explain the anticipated responses to the changes See comment in cell above.

Number: 7 Author: Author Subject: Sticky Note Date: 5/13/2014 1:50:56 PM

Should add a description for what aquifer type these published values are based on - e.g. An alluvial aquifer comprised of med to fine sand and silt.

Number: 8 Author: Author Subject: Sticky Note Date: 5/13/2014 1:54:58 PM

Should explain what is the bias, or limitation if the time-step is not short enough.

Number: 9 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:10 PM

Should explain why this is felt to be the case.

Number: 10 Author: Author Subject: Text Box Date: 5/13/2014 1:57:29 PM

..and the temporal resolution of the data being calibrated to.

Number: 11 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:03 PM

This is generally OK. However, it is suggested to present the initial assigned values (actual numbers) being used in the model and the date these observations were made. It is understood that this may need to be populated once model calibration begins.

Table 3
Summary of Model Assumptions and Limitations

Model Input/Boundary Condition	Initial Assignment in Model (range)	Source Information for Model Assignment	Final Assignment in Model (post-calibration)	Potential Bias/Limitation of Model Assignment/Assumption	Cause-Effect from Changes to Assignments during Calibration	Anticipated Sensitivity during Model Calibration/Uncertainty after Calibration
Upstream River No-Flow	No-flow	Historical gradients in the different units generally support flow from upland to the river, parallel to the model boundaries	To be completed after final calibration	If the boundary is sufficiently close to the pumping wells, then it is possible that the capture zone could extend to the model boundary.	If the capture zone from the HC&C pumping wells reaches the upstream boundary of the model, then it could over predict the drawdowns simulated in the model.	The model calibration is not expected to be sensitive to the no-flow assumption at the upstream boundary because it is more than 2,000 feet from the upstream-most HC&C well, which is sufficiently far away such that it will not be affected by the boundary condition. This has been demonstrated in previous modeling exercises by the extent of the capture zone associated with the upstream-most HC&C well. Therefore, the uncertainty in the model predictions resulting from this assumption is minimal.
Downstream River No-Flow	No-flow	Historical gradients in the different units generally support flow from upland to the river, parallel to the model boundaries	To be completed after final calibration	If the boundary is sufficiently close to the pumping wells, then it is possible that the capture zone could extend to the model boundary.	If the capture zone from the HC&C pumping wells reaches the downstream boundary of the model, then it could over predict the drawdowns simulated in the model.	The model calibration is not expected to be sensitive to the no-flow assumption at the downstream boundary because it is approximately 1,000 feet from the downstream-most HC&C well. While closer than the upstream boundary to the HC&C system, the U.S. Moorings basin is located between the HC&C system and the downstream boundary. Previous modeling has shown the HC&C system capture zone is constrained by the U.S. Moorings basin and would not reach the downstream boundary. Therefore, the uncertainty in the model predictions resulting from this assumption is minimal.
Basalt No-Flow	No-flow	Historical modeling assumed that significant flow zones do not exist in the basalt	To be completed after final calibration	Additional source of groundwater flow from the basalt to the Lower and Deep Lower Alluvium WBZs is not represented in the model.	If there are significant flow zones from the basalt into the Lower and Deep Lower Alluvium WBZs, representing the basalt as a no-flow boundary could lead to underestimating the groundwater flow on the Gasco and Siltronic sites and overestimate capture effectiveness.	Groundwater flow that is not represented in the model should be exhibited by an inability of the model to match hydrographs at Lower and Deep Lower Alluvium wells. Additional sources of groundwater flow can be modeled as necessary. Either constant head or specified flux boundaries can be added to any model layer in the Lower Alluvium or Deep Lower Alluvium.
Recharge	Recharge for paved areas will be set to 2 inches per year; recharge for unpaved areas will be based on precipitation data and can vary from 0 to daily total precipitation observed during the test period	For paved areas, 2011 model calibration; for unpaved areas will be based on observed precipitation at rain gages in the vicinity of the site	To be completed after final calibration	If infiltration is mis-specified, then water levels in the Fill, Silt, and Upper Alluvium can be affected in the model simulations.	A lower value of recharge rate will result in lower water levels in the upper units, specifically the Fill WBZ. These effects will be reflected in the water level data collected in the Fill WBZ during the full system tests, thereby providing a good level of support for the final recharge values selected.	The water levels in the Fill WBZ will be sensitive to the recharge boundary condition. The water level data collected during the full system tests provides an adequate constraint on the recharge boundary condition.

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Number: 1 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:33 PM

Basing proof from previous modeling has a high level of uncertainty. EPA is curious if observation data, such as drawdown influence in the area around this no flow boundary from pumping tests,has been observed.

The level of uncertainty for this boundary condition is probably moderate without observation data in the moorings basin.

Number: 2 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:22 PM

It is unclear what model this is referring to. Using a model for supporting initial assignments such as this no-flow boundary is OK, but the "historical" model used should be proven to be one to have demonstrated high calibration with groundwater levels in the lower alluvium and basalt layer - this should be noted. If it doesn't, it will need to be noted in the "Uncertainty" column (far right)

Number: 3 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:28 PM

These statements should be moved to the the "Bias/Limitations" column.

Number: 4 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:51 PM

EPA has 3 points for consideration:

1) These statements should be moved to the "cause-effect" column. The table is currently missing sensitivity/uncertainty description; please describe.

2) End of first sentence, insert: "...with hydraulic parameters set to reasonable/data supported assignments".

3) Include at end of this text statement: "These additional boundaries will add flow to the system and reduce over-estimates of capture effectiveness."

Number: 5 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:45 PM

Suggest inserting the following at end of sentence: "..... resulting in an under/over-estimation of flow entering the groundwater system and under/over-estimation of capture effectiveness at the Gasco/Siltronics site".

Number: 6 Author: Author Subject: Sticky Note Date: 5/13/2014 1:55:39 PM

Suggest including the following:

"Over-estimating recharge results in underestimating capture and dampens water level response, while under-estimating recharge will have the opposite effect."

Table 3
Summary of Model Assumptions and Limitations

Model Input/Boundary Condition	Initial Assignment in Model (range)	Source Information for Model Assignment	Final Assignment in Model (post-calibration)	Potential Bias/Limitation of Model Assignment/Assumption	Cause-Effect from Changes to Assignments during Calibration	Anticipated Sensitivity during Model Calibration/Uncertainty after Calibration
General Head Boundary at the Upper Allu[illegible]BZ on the No[illegible] Corner Below the Willamette River	Values will be assigned to represent predicted flows to this reach of the Willamette River in the City of Portland Deep Aquifer Yield Model and the USGS Portland Basin Model.	City of Portland Deep Aquifer Yield Model and the USGS Portland Basin Model	To be completed after final calibration	Underestimating the flow from the far shore of the river will result in prediction of a HC&C capture zone that extends too far out beneath the river.	If the general head boundary is mis-specified it could result in flows from the far shore being different from thos[illegible]edicted in the City of Por[illegible]ep Aquifer Yield Model and the USGS Portland Basin Model. The two regional models provide an adequate representation of the fluxes to the Willamette River from the far shore.	The extent of the HC&C capture zone beneath the river will be sensitive to this boundary condition. However, previous work by the City of Portland and USGS provid[illegible]ans of adequately representing this boundary condition.
Representation of Water Table in the Fill WBZ	The initial water table on the Fill WBZ will be based on data collected at the start of each set-point test period.	Site-specific data col[illegible]ior to pumping	To be completed after final calibration	The initial water levels in the water table aquifer will be based on water level data from site wells [illegible]does not pose an inherent limitation.	N/A	Model predictions in the Fill WBZ may be affected by the wetting and drying parameters used in the model. These parameters will be selected to provide numerical stability if the Fill WBZ becomes unsaturated during pumping or due to tidal/river stage fluctuations. The uncertainty surrounding the final choice of these parameters and their effect on model predictions are anticipated to be minor.
Constant Head Boundary (Willamette River)	This will be [illegible]able and reflect river stage data.	Based on two transducers on the river, both located on the dock at the site	Not a calibration parameter	This is based on data and as such does not pose an inherent limitation.	N/A	The model predictions are directly affected by this input; however, there is no uncertainty surrounding the specification of this boundary condition. Hence, there is no uncertainty in the model predictions from this boundary condition.

Notes:

ft/d = feet per day

HC&C = hydraulic control and containment

Kh = horizontal hydraulic conductivity

Kv = vertical hydraulic conductivity

N/A = not applicable

USGS = U.S. Geological Survey

WBZ = water bearing zone

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Number: 1 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:06 PM

EPA is curious whether there is any site data that could be referenced.

The flows predicted by these regional models should be provided at this location in the table.

Number: 2 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:22 PM

EPA is curious whether these models are well calibrated in this location. The answer has implications for the Uncertainty column.

Number: 3 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:22 PM

The first statement seems more appropriate for the Potential Bias/Limitations column. The last sentence should be moved to the Source Information column, but should include a basis (analysis/other) for why it is considered adequate.
A cause-effect description should be provided here. Increasing general head boundary flows would decrease HC&C capture effectiveness and decreasing general head boundary would increase HC&C capture. effectiveness.

Number: 4 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:06 PM

It is not clear where this boundary is located. Reference to a map should added to the model report would be helpful for the reader. The model layers that this boundary will be assigned should be added to the Initial Assignment column.

Number: 5 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:29 PM

An understanding of these model's calibration and compatibility with the Gasco Site Model in the location of this boundary assignment is needed. If there is limited calibration for these regional models in this location, then the uncertainty would appear to be high.

Number: 6 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:22 PM

Please identify what wells and what date are intended for use.

Number: 7 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:22 PM

For consideration: MODFLOW models sometimes have a coarser vertical discretization in the topmost layer to avoid drying/re-wetting numerical stability issues. If more vertical discretization is needed, care must be taken with the re-wetting parameters or another version of MODFLOW (surfact, NWT) should be considered. The aversion to adding shallow layers can be a bias in and of itself.

Number: 8 Author: Author Subject: Sticky Note Date: 5/13/2014 1:56:22 PM

Please note the layers that this boundary will be assigned.